

What is claimed is:

1. A process for insulating electrical components by applying a coat of polymerizable casting and impregnating composition and/or lacquer in flowable form to the surface of the components and then curing it using high-energy radiation, characterized in that the high-energy radiation is near-infrared (NIR) radiation.
2. The process as claimed in claim 1, characterized in that the NIR radiation has a wavelength of from 500 nm to 1400 nm, preferably from 750 nm to 1100 nm.
3. The process as claimed in either of claims 1 or 2, characterized in that the intensity maximum of the NIR radiation is situated within a wavelength range wherein the casting and impregnating composition or lacquer has an absorbance of between 20 and 80%, preferably between 40 and 70%.
4. The process as claimed in one of claims 1 to 3, characterized in that the NIR radiation is focused so that within the coats to be cured a temperature distribution adapted to the curing characteristics of the coating composition is achieved.
5. The process as claimed in one of claims 1 to 4, characterized in that the coating is additionally cured by means of thermal heating with heated gases, by means of UV light and/or by means of electron beams.
6. The process as claimed in one of claims 1 to 5, characterized in that the components are impregnated at ambient temperature or in a preheated state or are heated during impregnation.

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7. The process as claimed in claim 6, characterized in that, following impregnation and before curing, the components are heated to the stage of partial gelling.
- 5 8. The process as claimed in claim 7, characterized in that, following partial gelling, the components are treated with NIR radiation and then cured to completion thermally and/or with UV light.
- 10 9. The process as claimed in one of claims 1 to 8, characterized in that, prior to, simultaneously with or following thermal curing the components are treated with NIR radiation and with further
15 high-energy radiation, preferably UV radiation.
10. The process as claimed in one of claims 1 to 9, characterized in that the impregnation of the components takes place by immersion, flooding,
20 vacuum impregnation, vacuum pressure impregnation or trickling.
11. The process as claimed in claim 10, characterized in that electrically conducting windings of the
25 impregnated components are heated in the impregnating composition by applying current to an extent such that a desired amount of impregnating composition is gelled and fixed, in that after
30 this gelling the component is removed from the impregnating composition, ungelled impregnating composition runs off and, if desired, is cooled and recycled, and in that the components are subsequently cured.
- 35 ~~12.~~ An apparatus for insulating electrical components, comprising a coating means for applying a coat of polymerizable casting and impregnating composition and/or lacquer to the surface of the components

